REMARKS

The enclosed is responsive to the Examiner's Final Office Action mailed on July 24, 2008. At the time the Examiner mailed the Office Action claims 1-18 and 30-43, were pending. By way of the present response Applicants have: 1) amended claims 1, 8, 10, 30, 38, 40, and 41; and 2) added no new claims; and 3) canceled no claims. As such, claims 1-18 and 30-43 are now pending. No new matter has been added. Applicants respectfully request reconsideration of the present application and allowance of all claims now presented.

Claims 1-3, 6-9, 10-13, 16-18 and 30-43 are rejected three times under 35 U.S.C. §103(a) under three different primary references. Under MPEP 706.02 (I), only the "best available art" is to be used in making a rejection. Similarly, under 37 CFR 1.104, "in rejecting claims" only the "best available art" is to be used. Further, PTO's policy is against making multiple rejections of the same claims, since it is a waste of resources for both Applicant and PTO, and can lead to abuses. If the Examiner has a sound rejection, then there clearly is no legitimate reason for making additional rejections. However, if the Examiner's rejection is weak, the Examiner should not try to employ additional rejections, with the hope of sustaining one of the rejections. Such a strategy is improper and violates MPEP 706.02 (I) and 37 CFR 1.104. Applicant requests that the Examiner refrain from multiple rejections and limit rejections to **only** the "best available art."

35 U.S.C. § 112 Rejections

Claims 1, 8, 10, 30, 33, 40 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 10, 30, and 40 have been amended to more particularly point out and distinctly describe that "the normal operating temperatures" are those temperatures that the carrier substrate has when the heat generating component is operating normally.

Claims 8 and 40 have been amended to more particularly point out and distinctly claim the signal layer feature.

Claim 30 has been amended to remove the questionable language.

The Examiner has rejected claim 33 on the grounds that the activation temperature is claimed to be between about 30 ^{0}F and 200 ^{0}F, which the Examiner asserts is "unrealistic since it covers from a freezing point to almost a boiling point temperature." Applicants fail to understand the relevance of the boiling point and freezing point of pure water has on the activation temperature of the thermochromatic material. Generally, thermochromatic materials do not consist of pure water and while most thermochromatic materials are designed to have an activation temperature in the range claimed, some thermochromatic materials are even designed to have an activation temperature outside the range claimed. Applicants request that the Examiner either provide documented evidence that it is "unrealistic" for any thermochromatic material to have an activation temperature within the range claimed, or provide an affidavit by the Examiner relying on the Examiner's expertise in the field of thermochromatic materials to assert that there are no thermochromatic materials having an activation temperature within the claimed range.

The Office Action rejected claim 41 on the grounds that the disclosure allegedly lacks the means for producing and observing visible changes. Examiner's attention is directed to the entire specification, in particular to figures 2a, 2b, 3a, and 3b and to paragraphs [0020] to [0026], wherein various means are provided for changing the state of the visible surface, and various means are provided for observing such changes, such as with logos and identification labels, such as labels marked "HOT."

The Office Action rejected claims 7-8, 17-18, 40, and 42 on the grounds of an alleged lack of support in the disclosure for mixing the thermochromatic material and the solder material to form a single mixed layer. Examiner's attention is directed at least to original claim 18 and paragraph [0028], which provide support for the claimed feature.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1, 8, 10, 30, 33, 40 and 41 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

35 U.S.C. § 103(a) Rejections

Claims 1-3, 6-9, 10-13, 16-18 and 30-43 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,872,453 by Arnaud (hereinafter "Arnaud") or U.S. Patent No. 6,229,514 by Larson (hereinafter "Larson") or U.S.

Patent No. 4,922,242 by Parker (hereinafter "Parker"). In light of the amendment, the Examiner's rejections have become moot. Nonetheless, the following remarks regarding the Examiner's rejections and the amended claims may be helpful to expedite prosecution.

Claim 1 relates to the limitations that the thermochromatic material is **selected** to have its activation temperature **above the normal operating temperatures** of the **carrier substrate electrically coupled** to the heat generating component, and wherein the solder mask layer is **transparent** and **overlaying the thermochromatic** material **adjacent** to the **carrier substrate.** In contrast, Arnaud appears to disclose a sun switch, which switches on and off depending upon the temperature. As discussed in part in previous responses, the normal operating temperatures of the sun switch must be **above** the switching temperature of the thermochromatic material in order for the switch to operate as intended. In fact Arnaud teaches away from the activation temperature being above the normal operating temperatures of the sun switch because it would render the sun switch **inoperable** for which it were designed. Arnaud fails to disclose or suggest all the limitations claimed.

Similarly, Larson relates to a display, which as discussed at least in part in previous responses, has an activation temperature within the normal operating temperatures of the display, otherwise the display would be inoperable by definition. Thus, Larson fails to remedy the deficiencies of Arnaud.

Similar to Larson, Parker also discloses a display, which is similarly defective, as discussed in part in previous responses.

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or

as waiving any argument regarding that claim. Nonetheless, the following remarks regarding the Examiner's rejections and the amended claims may be helpful to expedite prosecution.

There is no disclosure or suggestion to mix the solder layer and the thermochromatic materials together, nor would it be obvious to do so because there is no disclosure or suggestion of a solder mask layer, nor a motivation suggested by any of the prior art of record to do so.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1-3, 6-9, 10-13, 16-18 and 30-43 under 35 U.S.C. § 103(a) as being unpatentable over Arnaud or Larson or Parker.

Response to Arguments

The Examiner has correctly identified that the prior art discloses visual changes occurring within the normal operating temperatures of the apparatus, thus failing to disclose or suggest an activation temperature above the normal operating temperature. However, the Office Action asserts that the applicants have not claimed such normal operating temperatures. The asserted reasoning is unclear to applicants. Nonetheless, applicants have amended the claims to more particularly point out and distinctly claim the feature at issue. In the event that the Examiner maintains the above rejection, in light of the amendment and above remarks, applicants request that the next Office Action elaborate further on the above assertion that the claims fail to claim an activation temperature above the normal operating temperatures of the carrier substrate.

CONCLUSION

Applicant respectfully submits that the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Mr. Neal Berezny at (408) 720-8300 or Mr. Michael A. Bernadicou at (408) 720-8300.

Pursuant to 37 C.F.R. 1.136(a)(3), applicant(s) hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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